IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF KANSAS

NANCY LITTLE, individually and as personal representative of the estate of ROBERT L. RABE,

Plaintiff,

v.

THE BUDD COMPANY,

Defendant.

Case No. 16-4170-DDC-KGG

MEMORANDUM AND ORDER

Plaintiff Nancy Little brings this action individually and as the personal representative of the estate of her father, Robert L. Rabe, against defendant The Budd Company. Plaintiff alleges that her father was exposed to asbestos-containing pipe insulation found in passenger railcars during his employment with the Atchison Topeka & Santa Fe Railroad ("ATSF"). She also alleges that defendant had manufactured and sold the railcars to ATSF. This exposure, plaintiff contends, caused her father to develop asbestos-related malignant mesothelioma, and it caused his death on December 28, 2012.

This matter comes before the court on defendant's motions seeking to exclude the expert testimony offered by three of plaintiff's expert witnesses. Defendant has filed three motions: (1) Motion to Exclude the Testimony of Dr. Arnold Brody (Doc. 97); (2) Motion to Exclude the Testimony of Dr. Barry Castleman (Doc. 99); and (3) Motion to Exclude the Testimony of Dr. Arthur Frank (Doc. 101).[1]

[1] Defendant's motions ask the court to hold a *Daubert* hearing. Exercising its discretion, the court denies defendant's request for a hearing because the record submitted with the parties' filings permits the court to determine the relevance and reliability of the proffered expert testimony without holding a

Plaintiff has responded to defendant's three motions. Plaintiff opposes defendant's motions to exclude the testimony of Dr. Arnold Brody and Dr. Castleman. Docs. 107, 109. And thus, she asks the court to deny defendant's motions to exclude the expert testimony of those two witnesses. The court considers the parties' arguments about the admissibility of those two expert's testimony in its analysis below. For reasons explained, the court denies defendant's motion to exclude the testimony of Dr. Arnold Brody. And the court grants defendant's motion to exclude the testimony of Dr. Castleman in part and denies it in part.

For Dr. Arthur Frank, plaintiff explains in her Response that she will not call this witness at trial. Thus, plaintiff asserts, defendant's motion to exclude Dr. Frank's testimony is moot. Because plaintiff will not offer Dr. Frank's testimony at trial, the court denies defendant's Motion to Exclude the Testimony of Dr. Frank as moot.

I. Factual Background

A. Dr. Arnold Brody

Dr. Arnold Brody is a Professor Emeritus in the Pathology Department of Tulane University Medical School. Also, he serves as an Adjunct Professor at North Carolina State University in its Department of Molecular and Biomedical Sciences. Before he accepted the faculty appointment in North Carolina in September 2006, Dr. Brody was a professor and the Vice Chair of the Department of Pathology of the Tulane University Medical School. Dr. Brody has a Bachelor of Science degree in Zoology from Colorado State University, a Master of Science degree in Functional Vertebrate Anatomy from the University of Illinois, and a Ph.D. in Cell Biology with a specialty in Ultrastructural Cytology from Colorado State University.

hearing. *See Goebel v. Denver & Rio Grande W. R.R.*, 215 F.3d 1083, 1087 (10th Cir. 2000). The court provides additional explanation for its reasoning, below. *See infra* Part II.

Dr. Brody has "practiced for decades in the field of biomedical sciences, focusing on the pathobiology of several lung diseases." Doc. 107-1 at 1 (Dr. Brody's Expert Report ¶ 4). Since the 1970s, Dr. Brody has "concentrated his research on how asbestos causes lung disease." *Id.* He has published more than 150 articles in peer-reviewed scientific literature about lung cell biology, asbestos, and lung disease. Also, Dr. Brody has spoken at medical and scientific conferences around the world about lung cell biology, asbestos, and lung disease.

In the mid-1970s, Dr. Brody worked with Dr. Chris Wagner, a prominent researcher in asbestos disease. Dr. Wagner had developed an animal model of disease demonstrating that rats—when exposed to asbestos—develop the same diseases that humans can develop when exposed to asbestos. These diseases include asbestosis, lung cancer, and mesothelioma. Dr. Brody built upon Dr. Wagner's model. Dr. Brody's research has shown that the cells from which those diseases develop are the same in animals as they are in humans. His research also has shown that inhaled asbestos fibers land in the same place in animals as they do in humans.

In his Expert Report, Dr. Brody provides general background information about asbestos fiber types. *Id.* at 3 (Dr. Brody's Expert Report ¶ 7). Also, he identifies the "four major diseases caused by inhalation of asbestos fibers: asbestosis, pleural plaques, lung cancer, and mesothelioma." *Id.* at 4 (Dr. Brody's Expert Report ¶ 8). Dr. Brody opines that "[a]ll of the asbestos fiber types cause all of these four disease categories." *Id.* And Dr. Brody explains that mesothelioma occurs "when a mesothelial cell of the pleural or peritoneal surfaces develops a sufficient number of genetic errors in a set of genes that controls cell growth," and that "[a]ll of the asbestos varieties induce the genetic errors described above and cause this cancer." *Id.* at 10–11 (Dr. Brody's Expert Report ¶ 16). According to Dr. Brody, "[t]he fibers that cause mesothelioma reach the pleural surfaces through the lymphatic pathways, and they interact with

the target cells of the mesothelial surfaces." *Id.* Dr. Brody explains that "[w]hen a sufficient number of genetic errors has accumulated in a single mesothelial cell, this cell can undergo neoplastic transformation and grow into a deadly tumor . . . ." *Id.* at 11 (Dr. Brody's Expert Report ¶ 17). Dr. Brody opines that "[i]t typically takes many decades for a sufficient number of mutations to occur in a single mesothelial cell because of the numerous effective defense mechanisms that destroy genetically defective cells, thus explaining the long latencies known for this cancer." *Id.*

Dr. Brody has focused his research "specifically on the process by which asbestos fibers cause . . . disease" such as clinical asbestosis, lung cancer, and mesothelioma. *Id.* at 13 (Dr. Brody's Expert Report ¶ 20). Dr. Brody's Report describes how asbestos causes disease by entering the body through a person's air pathways, interacting with the body's defense mechanisms, disrupting cell division, and damaging DNA. *Id.* at 13–20 (Dr. Brody's Expert Report ¶¶ 22–43). Dr. Brody explains that "[t]he body has defense mechanisms that operate to limit the scope of DNA damage," but "some cells with genetic damage caused by asbestos will replicate" and "[o]ver time, future generations of cells carrying this original genetic error may accumulate additional genetic errors from asbestos fibers . . . ." *Id.* at 19 (Dr. Brody's Expert Report ¶¶ 41–42). Dr. Brody opines: "When a single cell accumulates enough errors, and the number of errors required will vary by individual and according to many other factors, it begins to divide uncontrollably, and cancer is the loss of control of cell growth." *Id.* (Dr. Brody's Expert Report ¶ 42).

In the course of his teaching career, and while giving presentations to the scientific community, and in court testimony about how asbestos causes disease, Dr. Brody has used a series of slides to illustrate the process described above—*i.e.*, how asbestos fibers cause disease.

Dr. Brody's Expert Report describes these slides in paragraphs 23 to 42. *Id.* at 14–19. These slides include: (1) a diagram of the air pathways in humans (Slide 1); (2) a picture of Dr. Brody with his electron microscope (Slide 2); (3) an image taken with the electron microscope of the airways in the lung (Slide 3); (4) an electron micrograph of a human bronchiole (Slide 4); (5) a depiction of the end of an airway which opens into a gas exchange area (Slide 5); (6) a depiction of the epithelial cells that line the airspaces in the lung (Slide 6); (7) an electron micrograph of a macrophage picking up a pollen grain (Slide 7); (8) an electron micrograph of an asbestos fiber bundle (Slide 8); (9) photographs of asbestos fiber deposited in a gas exchange area of a lab animal (Slides 9 & 10); (10) an image of an asbestos fiber transported through the lymphatic system of an lab animal (Slide 11); (11) an artist's rendition of the lymphatic system in a human lung (Slide 12); (12) an artist's rendition of the lymphatic transport of an asbestos fiber in a human lung (Slide 13); (13) an image of a section of human lung tissue with pleural plaques (Slide 14); (14) medical illustrations and diagrams depicting asbestosis, lung cancer, and mesothelioma (Slides 15, 16, & 17); (15) an electron microscope photo of cells, including human DNA (Slide 18); (16) a photograph of a cell division affecting human chromosomes (Slide 19); (17) a Karyotype rendering 23 pairs of human chromosomes (Slide 20); (18) an illustration of normal cell division (Slide 21); (19) a photograph of a single animal chromosome dividing abnormally in the presence of asbestos fiber (Slide 22); (20) cell division in a mesothelial cell disrupted by asbestos (Slide 23); and (21) an artist's rendering of the various stages of cancer formation (Slide 24). *Id.*

After explaining how asbestos causes lung disease, Dr. Brody's Expert Report concludes with the following opinion:

> The asbestos-included cancers are dose-response diseases, in that the more asbestos a person is exposed to, the more likely that person is to develop disease. . . . As

> asbestos exposures occur over time, some proportion of those fibers are retained in the lungs and can be translocated to the various sites where the diseases develop, and the genetic errors caused by asbestos fibers accumulate. Once a person develops an asbestos-related cancer, it is not possible to exclude any of the person's above-background exposures to asbestos from the causal chain. Each and every exposure to asbestos that an individual with mesothelioma experienced in excess of a background level contributes to the development of the disease.

Id. at 20–21 (Dr. Brody's Expert Report ¶ 44). Also, Dr. Brody opines that "[a]sbestos is the only known environmental cause of mesothelioma in the United States" and "[t]he consensus scientific opinion . . . is that no amount of exposure to asbestos above the background levels present in ambient air has been established as too low to induce mesothelioma." *Id.* at 21 (Dr. Brody's Expert Report ¶ 45). Dr. Brody has testified about his opinion in another lawsuit, providing additional explanation and clarification for his opinion:

> Q. Okay. So if the person who has the eight weeks of exposure and 30 years later develops mesothelioma, and prior to that eight weeks of exposure walks through a garage where there is brake work going on or friction work going on, I think you would tell me that contributed to his mesothelioma?
>
> A. I think you're putting words in my mouth. I wouldn't say that walking through a passive brake job contributes. I would never say that. My testimony is that you have to be exposed days, weeks, typically months or more for that to be a contributing factor. So walking through doesn't mean anything to me.

Doc. 107-4 at 7–8 (Brody Dep. 33:19–34:10).[2]

Dr. Brody's Expert Report offers no opinions specific to the decedent in this case—Mr. Rabe. Instead, as plaintiff asserts, Dr. Brody provides expert testimony on general causation, including the biological mechanism of asbestos injury.

[2] This deposition testimony came from *Bodine v. 3M Co.*, No. 13-CV-02497 (D. Minn.). Plaintiff has submitted a Declaration from Benjamin H. Adams, an attorney in that case, to authenticate Dr. Brody's deposition transcript from the *Bodine* case. Defendant hasn't disputed the transcript's authenticity.

B. Dr. Barry Castleman

Dr. Barry Castleman has more than 40 years of experience "in the area of asbestos and other occupation and environmental health problems." Doc. 109-5 at 1 (Dr. Castleman's Expert Report). He works in the field of occupational and environmental health policy, focusing on "the recognition of risk factors and the prevention of disease from industrial activities." *Id.*

In 1968, Dr. Castleman received a Bachelor of Science degree in chemical engineering from Johns Hopkins University. In 1972, he earned a Master's Degree in Environmental Engineering, also from Johns Hopkins University. In 1985, Dr. Castleman was awarded a Doctor of Science Degree in Health Policy from Johns Hopkins School of Hygiene and Public Health. Dr. Castleman's doctoral work "was mainly in the areas of toxicology, epidemiology, biostatistics, physiology, and public health policy." *Id.*

Dr. Castleman authored a doctoral thesis titled *Asbestos: An Historical Case Study of Corporate Response to an Industrial Health Hazard*. *Id.* His thesis is largely identical to a 1984 book that he published titled *Asbestos: Medical and Legal Aspects*. *Id.* Dr. Castleman's thesis and book provide a "historical review of the asbestos problem as a public health problem in society worldwide, but mainly in the United States." *Id.* And they include "a comprehensive review of medical literature of all kinds, as well as other literature available in libraries and published sources such as government publications, safety magazines, engineering journals, trade magazines, insurance publications, encyclopedias, popular magazines, and newspapers." *Id.* Several courts, including the Supreme Court, have cited Dr. Castleman's book. *See, e.g.*, *Amchem Prods., Inc. v. Windsor*, 521 U.S. 591, 631 (1997) (Breyer, J., concurring in part and dissenting in part); *Peerman v. Georgia-Pacific Corp.*, 35 F.3d 284, 285 (7th Cir. 1994); *Nicolet,*

Inc. v. Nutt, 525 A.2d 146, 148 (Del. 1987) (referring to Dr. Castleman's book as a "learned treatise").

In addition to published information, Dr. Castleman has examined unpublished historical documents addressing asbestos hazards. Doc. 109-5 at 1 (Dr. Castleman's Expert Report). These documents include trade association minutes, corporate documents, and testimony by corporate officials. *Id.* Also, Dr. Castleman has interviewed "old-timers in the field of industrial medicine and hygiene," including physicians who were active in the field of occupational medicine and had studied asbestos. *Id.*

Dr. Castleman has authored many articles about asbestos disease. Doc. 109-3 at 2–4 (Dr. Castleman's Curriculum Vitae). He has testified about asbestos exposure before committees of the United States Senate and House of Representatives. *Id.* at 2. And he has served as a consultant to many organizations including Congress's Office of Technology Assessment, the Consumer Product Safety Commission, the Environmental Protection Agency, the Occupational Safety and Health Administration, the National Academy of Sciences, the Environment Defense Fund, and the Natural Resources Defense Council. *Id.* at 1–2.

Dr. Castleman's Expert Report summarizes "the body of knowledge" about asbestosis, lung cancer, and mesothelioma starting in the late 1800s. Doc. 109-5 at 2–7 (Dr. Castleman's Expert Report). Specifically, he provides information about the history of the railroad industry's awareness of asbestos hazards. *Id.* at 15. Based on his review of the historical record, Dr. Castleman concludes that "the literature had largely established that asbestos was a lethal material by the early 1930s." *Id.* at 16. Also, Dr. Castleman opines that "[b]y the mid-1940s, it was widely accepted . . . that asbestos inhalation could also cause lung cancer." *Id.* And "[t]he risk of mesothelioma . . . became a subject of intense discussion in the early 1960s . . . ." *Id.* Dr.

Castleman opines that the literature addressing the risks of asbestos exposure "was available in the medical libraries to anyone who knew how to spell the word asbestosis." *Id.* And finding any of this literature would not "require using any kind of computer search or any other kind of modern technique." *Id.*

II. Legal Standard

The court has a "gatekeeping obligation" to determine the admissibility of expert testimony. *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 147 (1999) (citing *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579, 589 (1993)). When performing this gatekeeping role, the court has broad discretion. *Kieffer v. Weston Land, Inc.*, 90 F.3d 1496, 1499 (10th Cir. 1996) (citing *Orth v. Emerson Elec. Co.*, 980 F.2d 632, 637 (10th Cir. 1992)). Courts exercise this discretion under Federal Rule of Evidence 702. It provides:

> A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if:
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> (a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue;
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> (b) the testimony is based on sufficient facts or data;
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> (c) the testimony is the product of reliable principles and methods; and
>
> (d) the expert has reliably applied the principles and methods to the facts of the case.

Fed. R. Evid. 702.

Our Circuit has directed trial judges to apply a two-part test to determine admissibility. *Conroy v. Vilsack*, 707 F.3d 1163, 1168 (10th Cir. 2013). First, the court must determine "whether the expert is qualified 'by knowledge, skill, experience, training, or education' to render an opinion." *United States v. Nacchio*, 555 F.3d 1234, 1241 (10th Cir. 2009) (quoting

Fed. R. Evid. 702). Second, the court "'must satisfy itself that the proposed expert testimony is both reliable and relevant, in that it will assist the trier of fact, before permitting a jury to assess such testimony.'" *Id.* (quoting *United States v. Rodriguez-Felix*, 450 F.3d 1117, 1122 (10th Cir. 2006)) (further citations omitted).

To qualify as an expert witness, the witness must possess "such skill, experience or knowledge in that particular field as to make it appear that his opinion would rest on substantial foundation and would tend to aid the trier of fact in his search for truth." *LifeWise Master Funding v. Telebank*, 374 F.3d 917, 928 (10th Cir. 2004) (citation and internal quotation marks omitted). To determine whether the expert's testimony is reliable, the court must assess "whether the reasoning or methodology underlying the testimony is scientifically valid and . . . whether that reasoning or methodology properly can be applied to the facts in issue." *Daubert*, 509 U.S. at 592–93.

In *Daubert*, the Supreme Court identified four factors that—though not exhaustive—trial courts may consider when determining reliability of proffered expert testimony under Fed. R. Evid. 702. They are: (1) whether the theory used can be and has been tested; (2) whether it has been subjected to peer review and publication; (3) the known or potential rate of error; and (4) general acceptance in the scientific community. *Id.* at 593–94. The Supreme Court has emphasized, however, that these four factors are not a "definitive checklist or test," and that a court's gatekeeping inquiry into reliability "must be tied to the facts of a particular case." *Kumho Tire*, 526 U.S. at 150 (citations and internal quotation marks omitted).

But in some cases, "the relevant reliability concerns may focus upon personal knowledge or experience," rather than the *Daubert* factors and scientific foundation. *Id.* For such testimony to satisfy the reliability standard, it "must be 'based on actual knowledge, and not mere

"subjective belief or unsupported speculation."'" *Pioneer Ctrs. Holding Co. Emp. Stock Ownership Plan & Trust v. Alerus Fin., N.A.*, 858 F.3d 1324, 1341–42 (10th Cir. 2017) (quoting *Mitchell v. Gencorp, Inc.*, 165 F.3d 778, 780 (10th Cir. 1999) (quoting *Daubert*, 509 U.S. at 590)). "When expert opinion 'is not supported by sufficient facts to validate it in the eyes of the law, or when indisputable record facts contradict or otherwise render the opinion unreasonable, it cannot support a jury's verdict' and will be excluded." *Id.* at 1342 (quoting *Brooke Grp. Ltd. v. Brown & Williamson Tobacco Corp.*, 509 U.S. 209, 242 (1993)).

"The proponent of expert testimony bears the burden of showing that the testimony is admissible." *Conroy*, 707 F.3d at 1168 (citing *Nacchio*, 555 F.3d at 1241). "[R]ejection of expert testimony is the exception rather than the rule." Fed. R. Evid. 702 advisory committee's notes to 2000 amendments. While *Daubert* requires the court to serve as a gatekeeper for expert testimony, "[v]igorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof" remain "the traditional and appropriate means of attacking shaky but admissible evidence." *Daubert*, 509 U.S. at 596 (citation omitted).

The court also has discretion to determine how to perform its gatekeeping function under *Daubert*. *Goebel v. Denver & Rio Grande W. R.R.*, 215 F.3d 1083, 1087 (10th Cir. 2000). "The most common method for fulfilling this function is a *Daubert* hearing, although such a process is not specifically mandated." *Id.* (citations omitted); *see also United States v. Charley*, 189 F.3d 1251, 1266 (10th Cir. 1999) ("The trial judge is granted great latitude . . . in deciding whether to hold a formal [*Daubert*] hearing."). The district court also may satisfy its gatekeeping role when ruling on a *Daubert* motion "so long as the court has sufficient evidence to perform 'the task of ensuring that an expert's testimony both rests on a reliable foundation and is relevant to the task at hand.'" *Goebel*, 215 F.3d at 1087 (quoting *Daubert*, 509 U.S. at 597).

Here, defendant's motions ask the court to hold a *Daubert* hearing. Docs. 97 at 1 & 99 at 1. Plaintiff's filings never respond to that request. But, exercising its discretion, the court concludes that it need not hold a *Daubert* hearing to rule defendant's motions to exclude. And after reviewing the parties' filings and attached exhibits carefully, the court finds that the parties have provided a sufficient record to render a decision without a hearing. The court thus denies defendant's request for a *Daubert* hearing.

III. Analysis

The court first addresses defendant's arguments to exclude the testimony of Dr. Brody. The court then turns to consider defendant's arguments to exclude Dr. Castleman's testimony.

A. Arnold Brody

Defendant's motion argues that the court should exclude Dr. Brody's testimony under Federal Rule of Evidence 702 and *Daubert* because, defendant contends, his opinions are not reliable and not helpful to the jury. Defendant's motion thus focuses on the second part of the two-part test that the court must apply to determine whether Dr. Brody's expert testimony is admissible. *See United States v. Nacchio*, 555 F.3d 1234, 1241 (10th Cir. 2009) (explaining that the second part of the test requires the court to "'satisfy itself that the proposed expert testimony is both reliable and relevant, in that it will assist the trier of fact, before permitting a jury to assess such testimony.'" (quoting *United States v. Rodriguez-Felix*, 450 F.3d 1117, 1122 (10th Cir. 2006)) (further citations omitted).

Defendant never asserts that Dr. Brody's testimony fails to satisfy the first part of the two-part test. The first part of that test requires the court to determine "whether the expert is qualified 'by knowledge, skill, experience, training, or education' to render an opinion." *Id.* (quoting Fed. R. Evid. 702). After reviewing the materials submitted with plaintiff's response to

defendant's motion, the court is satisfied that Dr. Brody is qualified to testify about the opinions set forth in his Expert Report. As already described, Dr. Brody has a Ph.D. in Cell Biology with a specialty in Ultrastructural Cytology from Colorado State University. Currently, Dr. Brody is a Professor Emeritus in the Pathology Department of Tulane University Medical School and an Adjunct Professor at North Carolina State University in the Department of Molecular and Biomedical Sciences. For decades, Dr. Brody has worked in the field of biomedical sciences, focusing on the pathobiology of several lung diseases. Since the 1970s, Dr. Brody has concentrated his research on how asbestos causes lung disease. Dr. Brody has published more than 150 peer-reviewed articles in the scientific literature and has presented his research at medical and scientific conferences around the world on lung cell biology, asbestos, and lung disease.

Dr. Brody's Expert Report (Doc. 107-1) establishes that he bases his opinions on his education, training, and experience in the field of biomedical science, and particularly his research in the areas of lung cell biology, asbestos, and lung disease. The court finds that this education, training, and experience makes Dr. Brody qualified to testify about the opinions in his Expert Report. *See Util. Trailer Sales of Kan. City, Inc. v. MAC Trailer Mfg., Inc.*, 267 F.R.D. 368, 370 (D. Kan. 2010) ("Experience alone—or experience combined with other knowledge, skill, training, or education—may provide a sufficient foundation for expert testimony." (citing Fed. R. Evid. 702 advisory committee's note to the 2000 amendments)). The court thus concludes that Dr. Brody's testimony satisfies the first part of the two-part test for admissibility.

Turning to the second part of the test, defendant advances four arguments challenging the reliability and relevance of Dr. Brody's testimony. The court addresses each of those arguments, in turn, below.

First, defendant argues that Dr. Brody's testimony is irrelevant and immaterial because he is not familiar with Mr. Rabe's condition or with the effects of asbestos on humans. Plaintiff concedes that Dr. Brody will not offer testimony specific to Mr. Rabe's condition. Instead, Dr. Brody will provide testimony about general causation, *i.e.*, how asbestos exposure causes lung disease in humans. And, plaintiff contends, the issue of general causation is relevant to plaintiff's claims here because she bears the burden of showing that Mr. Rabe's exposure to asbestos in defendant's passenger cars caused Mr. Rabe to develop mesothelioma. Indeed, several other federal courts have found that Dr. Brody's expert testimony on general causation is relevant in asbestos cases and thus have permitted him to provide expert testimony of this kind. *See, e.g.*, *Waite v. AII Acquisition Corp.*, 194 F. Supp. 3d 1298, 1315 (S.D. Fla. 2016) (concluding that although "Dr. Brody has not expressed an opinion regarding specific causation of [plaintiff's] cancer," he instead "simply provides reliable background on asbestos diseases like mesothelioma—going to general causation" and thus "his testimony is permissible"); *Rabovsky v. Air & Liquid Sys. Corp.*, No. 10-3202, 2012 WL 876752, at *3–4 (E.D. Pa. Mar. 13, 2012) (denying motion in limine to exclude Dr. Brody's opinions because the court concluded his testimony about causation was relevant and reliable); *In re Asbestos Prods. Liab. Litig.*, No. 09-69123, 2010 WL 4676563, at *3 (E.D. Pa. Nov. 15, 2010) (finding Dr. Brody's testimony was relevant and reliable when it was "limited to general testimony about how asbestos causes cancer" but did "not include any opinion [about] specific causation in this case" and recognizing that plaintiffs were offering "Dr. Brody's testimony to educate the jury about the physiological design and function of the lungs, how asbestos fibers migrate throughout the body and are deposited in the lungs, the different types of asbestos fibers, and how all exposures to asbestos contribute to cause an individual's disease." (internal quotation marks omitted)). The court finds

these rulings highly persuasive and agrees that Dr. Brody's expert testimony about general causation is relevant to the issues in this case. Thus, the court declines to exclude his testimony based on defendant's relevance argument.

Also, the court rejects defendant's argument that Dr. Brody's testimony is not relevant because he has based his research on laboratory animals. Although Dr. Brody has used animals in his research, he asserts that his research has shown "that the cells from which those diseases develop are the same in animals as they are in humans, and that the inhaled asbestos fibers land in the same place in animals as they do in humans." Doc. 107-1 at 12 (Dr. Brody Expert Report ¶ 18). Dr. Brody explains that his research "has focused specifically on the process by which asbestos causes these diseases, by controlling the animals' dose of asbestos and then examining their lungs at various times after the exposure occurred." *Id.* at 13 (Dr. Brody Expert Report ¶ 20). Dr. Brody asserts that "[m]any of his peer-reviewed publications have addressed this issue." *Id.* When presented with Dr. Brody's testimony about general causation, at least one other court has rejected a challenge similar to defendant's argument here. *See In re Asbestos Prods. Liab. Litig.*, 2010 WL 4676563, at *3–4 (refusing to exclude Dr. Brody's opinion because he had not relied on epidemiological studies and finding that his opinion still was relevant and reliable because it relied on more than 100 peer-reviewed publications explaining the relationship between asbestos fibers and disease processes generally). Likewise, the court rejects defendant's argument here. Defendant's challenge to Dr. Brody's opinions based on its argument that his research used laboratory animals goes to the weight of his testimony—not its admissibility. Defendant can explore this subject on cross-examination and try to convince the jury that this component of Dr. Brody's research renders its implausible. But it does not permit the court to exclude his opinion.

Second, defendant asserts that the court should exclude Dr. Brody's testimony under Federal Rule of Evidence 403 because: (1) its probative value is substantially outweighed by the risk of undue prejudice; (2) the testimony is confusing; and (3) it will waste time. Federal Rule of Evidence 403 provides: "The court may exclude relevant evidence if its probative value is substantially outweighed by a danger of one or more of the following: unfair prejudice, confusing the issues, misleading the jury, undue delay, wasting time, or needlessly presenting cumulative evidence." Defendant asserts that Dr. Brody's testimony is unduly prejudicial and confusing because he uses slides that include magnified images of cells to illustrate how asbestos can cause lung disease. Defendant contends that the "sheer size" of these images creates a prejudicial and misleading impression. Doc. 98 at 7. The court disagrees. Dr. Brody's Expert Report provides a description of each slide, supporting its content with scientific reasoning and explaining how the slides show how the disease progresses. The court finds nothing prejudicial or confusing about these slides. Certainly, defendant can cross-examine Dr. Brody about the magnification of these slides. But the court will not exclude Dr. Brody's testimony for this reason.

Also, defendant argues, Dr. Brody's testimony is an undue waste of time because it "typically lasts more than one full day." *Id.* at 8. Plaintiff calls this description "hyperbolic." Doc. 107 at 15. And plaintiff estimates that Dr. Brody's entire testimony (including direct and cross-examination) should last about three hours. *Id.* The court finds that Dr. Brody's proffered testimony—*i.e.*, general causation issues that are relevant to the case—is not an undue waste of time, especially when plaintiff estimates it should only take three hours for Dr. Brody to complete that testimony.

Third, defendant argues that Dr. Brody will testify that "each and every asbestos fiber inhaled by Mr. Rabe was capable of causing" his mesothelioma. Doc. 98 at 8. This opinion is inadmissible under Federal Rule of Evidence 702 and *Daubert*, defendant argues, because Dr. Brody asserts that no threshold exists for determining when exposure to asbestos above background levels is sufficient to cause mesothelioma.

Plaintiff responds that defendant's argument mischaracterizes Dr. Brody's testimony. Plaintiff asserts that Dr. Brody will not testify that each asbestos fiber is a substantial cause of mesothelioma. Instead, as Dr. Brody's Expert Report explains, "asbestos-included cancers are dose-response diseases, in that the more asbestos a person is exposed to, the more likely that person is to develop disease." Doc. 107-1 at 20–21 (Dr. Brody's Expert Report ¶ 44). "Once a person develops an asbestos-related cancer, it is not possible to exclude any of the person's above-background exposures to asbestos from the causal chain." *Id.* "Each and every exposure to asbestos that an individual with mesothelioma experienced in excess of a background level contributes to the development of the disease." *Id.* Also, Dr. Brody opines that "[t]he consensus scientific opinion . . . is that no amount of exposure to asbestos above the background levels present in ambient air has been established as too low to induce mesothelioma." *Id.* at 21 (Dr. Brody's Expert Report ¶ 45). And, in another case, Dr. Brody testified that he does not believe that passive exposure to asbestos can cause lung disease; instead, a person must "be exposed [to asbestos] days, weeks, typically months or more for that [exposure] to be a contributing factor." Doc. 107-4 at 7–8 (Brody Dep. 33:19–34:10).

Other courts have rejected similar *Daubert* challenges to Dr. Brody's testimony on the premise that he is opining that "every exposure" causes mesothelioma. These courts have explained that his testimony never makes the "inferential leap that is troublesome in the 'every

exposure' or 'cumulative exposure' theories—that is, he does not opine that because an exposure occurred and necessarily adds to the total dose, that single exposure must be a substantial cause." *Jack v. Borg-Warner Morse TEC, LLC*, No. C17-0537JLR, 2018 WL 3819027, at *17 (W.D. Wash. Aug. 10, 2018). Instead, Dr. Brody's testimony offers "general statements of the science behind asbestos-related disease." *Id.* at *16. His testimony includes "[t]he fact that every exposure adds to the total dose" which "is an 'irrefutable scientific fact,' and it is 'well-established' that the threshold level for developing mesothelioma is unknown." *Id.* (quoting *Rost v. Ford Motor Co.*, 151 A.3d 1032, 1045 (Pa. 2016)). Under this reasoning, courts have held Dr. Brody's testimony reliable and thus admissible under *Daubert*. *Id.* (denying motion to exclude Dr. Brody's testimony because none of his opinions about general causation "run afoul of *Daubert*"); *see also Gore v. Air & Liquid Sys. Corp.*, No. 5:16-cv-716-BR, 2018 WL 4558182, at *11–12 (E.D.N.C. Sept. 21, 2018) (denying motion to exclude Dr. Brody's testimony because his "opinion . . . that mesothelioma is a dose-responsive disease and an individual's increasing exposure increases his or her risk of developing mesothelioma" was reliable and Dr. Brody did not "seek to testify that each and every one of [plaintiff's] exposures caused his mesothelioma because he [wasn't offering] specific testimony about [plaintiff]"); *Waite v. AII Acquisition Corp.*, 194 F. Supp. 3d 1298, 1315 (S.D. Fla. 2016) (concluding that although "Dr. Brody has not expressed an opinion regarding specific causation of [plaintiff's] cancer," he instead "simply provides reliable background on asbestos diseases like mesothelioma—going to general causation" and thus "his testimony is permissible"); *Rabovsky v. Air & Liquid Sys. Corp.*, No. 10-3202, 2012 WL 876752, at *4 (E.D. Pa. Mar. 13, 2012) (holding that Dr. Brody's "each-and-every-exposure opinion" was not "legally insufficient to prove substantial-factor causation"); *In re Asbestos Prods. Liab. Litig.*, No. 09-69123, 2010 WL 4676563, at *3 (E.D. Pa. Nov. 15, 2010)

(holding that Dr. Brody's testimony satisfied the "reliability requirement of Rule 702 and *Daubert*" because it would "assist the jury in understanding the relationship between exposure to asbestos fibers and disease processes generally" and rested on a "breath of peer-reviewed publications").

Applying the sound reasoning of these federal cases, the court concludes that Dr. Brody's testimony is sufficiently reliable because it rests on general scientific principles about how asbestos exposure causes mesothelioma. Also, Dr. Brody offers no testimony about the specific causation of Mr. Rabe's mesothelioma. Thus, he expresses no opinion about Mr. Rabe's individual exposures and whether those exposures caused his mesothelioma. The court thus concludes that none of Dr. Brody's opinions "run afoul of *Daubert*." *Jack*, 2018 WL 3819027, at *16.

Finally, defendant contends that Dr. Brody's testimony is cumulative. Defendant argues that another one of plaintiff's experts—Dr. Victor Roggli, a pathologist—will testify about the pathology of asbestos-related diseases. And so, defendant asserts, Dr. Brody's testimony about how asbestos fibers can cause lung disease, including mesothelioma, at the cellular level is cumulative of Dr. Roggli's testimony. Plaintiff disagrees. Plaintiff asserts that Dr. Roggli intends to offer testimony about specific causation—*i.e.*, his diagnostic opinions about how Mr. Rabe contracted mesothelioma. In contrast, Dr. Brody will offer testimony on general causation. Given these differences between the two witnesses' testimony, the court finds that Dr. Brody's testimony is not cumulative.

In sum, the court is not persuaded by any of defendant's arguments trying to exclude Dr. Brody's expert testimony at trial. Plaintiff has shown that Dr. Brody is qualified to testify about the expert opinions in his Report. Also, plaintiff has established that his opinions are both

relevant and reliable and that his testimony will help the jury understand the issues in the case. The court thus denies defendant's Motion to Exclude the Testimony of Dr. Arnold Brody.

B. Dr. Barry Castleman

In response to plaintiff's allegations that Mr. Rabe died from mesothelioma caused by exposure to asbestos in defendant's passenger railcars, defendant has asserted the "state of the art" affirmative defense. Doc. 68 at 18 (Pretrial Order ¶ 4.b.). That is, defendant asserts, its products "conformed to the state of the art at the time of sale and were designed, manufactured, and tested pursuant to generally recognized and prevailing standards and in conformance with the statutes, regulations, and requirements that governed the product or products at the time of design, manufacture, and sale, if any." *Id.* At trial, plaintiff intends to offer the testimony of Dr. Castleman to rebut defendant's affirmative defense. Dr. Castleman's proffered testimony will explain how knowledge of the risks of asbestos has progressed. Also, he will identify the information and literature available to defendant before and during Mr. Rabe's exposures to asbestos while working at ATSF.

Defendant argues that the court should exclude Dr. Castleman's testimony for three reasons. The court addresses each argument, in turn, below.

First, defendant asserts that Dr. Castleman is not qualified to offer opinions about medical articles or defendant's alleged knowledge of the dangers of asbestos. Defendant argues that Dr. Castleman is not a medical doctor, industrial hygienist, or epidemiologist. And, thus, defendant contends, Dr. Castleman is not qualified to interpret any of the medical literature that he plans to describe for the jury. But plaintiff responds that Dr. Castleman will not testify about the diagnosis of asbestos disease. Also, he will offer no opinions about specific or general causation. Instead, plaintiff will offer Dr. Castleman's testimony to discuss the development and

awareness of the hazards of asbestos in the scientific and technical community. Other courts have permitted Dr. Castleman to provide testimony like this because his testimony does not "judge the correctness of the medical literature." *Jack v. Borg-Warner Morse TEC, LLC*, No. C17-0537JLR, 2018 WL 3819027, at *17 (W.D. Wash. Aug. 10, 2018). Instead, he will explain "the historical development of knowledge regarding the health hazards of asbestos" which he is qualified to do. *Id.* at *18; *see also Waite v. AII Acquisition Corp.*, 194 F. Supp. 3d 1298, 1310 (S.D. Fla. 2016) (rejecting defendant's argument that Dr. Castleman did not possess "the level of expertise necessary to testify as to the contents and interpretation of the materials he has reviewed" and instead finding that Dr. Castleman's education, training, and experience established that he was qualified to provide the proffered expert testimony); *Krik v. Crane Co.*, 71 F. Supp. 3d 784, 787 (N.D. Ill. 2014) (holding that Dr. Castleman was qualified to testify about "the development of the awareness of the hazards of asbestos and available substitutes in the scientific and technical publications, internal corporate documents, and trade and professional organization documents").

Likewise, the court finds that Dr. Castleman is qualified to render his opinions. As discussed above, Dr. Castleman has extensive education, training, and experience in the field of occupational and environmental health policy and, specifically, for asbestos. Dr. Castleman holds a Doctor of Science Degree in Health Policy from Johns Hopkins School of Hygiene and Public Health. Also, he has authored a book that provides a historical review of the asbestos problem as a public health problem. Besides his book, Dr. Castleman has published many articles about asbestos disease. He has testified before Senate and House committees about asbestos exposure, and he has provided consulting services to many organizations. The court

finds that Dr. Castleman's curriculum vitae and Expert Report establish that he has the necessary education, training, and experience to qualify him as an expert witness.

But the court agrees with defendant that Dr. Castleman cannot testify about defendant's conduct or knowledge about the dangers of asbestos because he has no direct or indirect knowledge about defendant's corporate practices. Defendant also asserts that permitting Dr. Castleman to testify about defendant's knowledge would invade the jury's province. Other courts have precluded Dr. Castleman from testifying about what a defendant knew, or should have known about asbestos. *See, e.g.*, *Jack*, 2018 WL 3819027, at *17 (finding that, given the limitation that Dr. Castleman would not testify about "what any particular [d]efendant knew or should have known at any given time regarding asbestos," his testimony was "admissible under Rule 702 and *Daubert*"); *Krik*, 71 F. Supp. 3d at 788 (holding that Dr. Castleman could "observe that certain companies were members of relevant organizations, or that representatives of certain companies were members of relevant committees, but again he may not testify as to what a particular company knew or should have known as a result because he lacks sufficient foundation to do so"). These rulings are persuasive, and for the same reasons, the court precludes Dr. Castleman from testifying about defendant's knowledge of the risks of asbestos. But Dr. Castleman is qualified to offer his other opinions about the historic progression of the knowledge surrounding the risks of asbestos exposure.

Second, defendant argues that Dr. Castleman's summary of literature addressing the hazards of asbestos is not helpful to the jury because he merely recites the contents of medical literature. The court disagrees. As one court has observed, "[a] jury could not possibly examine every single letter, note, article, and publication reviewed and analyzed by Dr. Castleman in his more than four decades of practice and research." *Waite*, 194 F. Supp. 3d at 1311. Instead, Dr.

Castleman's research "can serve the purpose of providing context and grounding scientific information integral to the determination of this case." *Id.* Also, defendant argues, the court should exclude Dr. Castleman's testimony under Federal Rule of Evidence 403 because its relevance is outweighed by the risk of wasting time and confusing the jury. The court disagrees. Defendant placed the "state of the art" defense at issue by asserting it as an affirmative defense. In response, plaintiff offers Dr. Castleman's testimony to provide historical context about the knowledge of asbestos dangers. Dr. Castleman's testimony is relevant to this issue. And the court has little concern that his testimony will waste time or confuse the jury.

Finally, defendant asserts that Dr. Castleman cannot establish that the materials he relies on to support his opinions are reliable. Plaintiff responds that Dr. Castleman's testimony will not try to verify the findings of any particular piece of literature. Nor will Dr. Castleman vouch for any of the literature's content as being "true." So, plaintiff argues, none of Dr. Castleman's opinions are subject to hearsay objections. And, even if they were, plaintiff cites several exceptions to the hearsay rule. For example, plaintiff contends that Dr. Castleman's opinions rest on materials that satisfy the ancient document exception under Fed. R. Evid. 803(16), and the learned treatise exception under Fed. R. Evid. 803(18). Also, plaintiff asserts, Dr. Castleman has summarized scientific articles into tables and charts in his book that qualify as a summary of voluminous writings admissible under Fed. R. Evid. 1006. Finally, plaintiff argues, Fed. R. Evid. 703 provides that when an expert bases his opinion "on facts or data" that "experts in the particular field would reasonably rely on . . . in forming an opinion on the subject, they need not be admissible for the opinion to be admitted." For all these reasons, plaintiff has shown that Dr. Castleman may rely on the materials he has described to form his opinions. The court thus declines to exclude his testimony as unreliable.

IV. Conclusion

For the reasons explained by this Order, the court concludes that Dr. Arnold Brody and Dr. Barry Castleman's opinions satisfy the requirements of Federal of Evidence 702 and *Daubert*—with one limitation. Dr. Castleman may not testify about defendant's knowledge of the risks of asbestos because he lacks personal knowledge to provide such testimony. But subject to that limitation, the court finds that Dr. Brody and Dr. Castleman's testimony is admissible expert testimony.

IT IS THEREFORE ORDERED BY THE COURT THAT defendant's Motion to Exclude the Testimony of Dr. Arnold Brody (Doc. 97) is denied.

IT IS FURTHER ORDERED THAT defendant's Motion to Exclude the Testimony of Dr. Barry Castleman (Doc. 99) is granted in part and denied in part.

IT IS FURTHER ORDERED THAT defendant's Motion to Exclude the Testimony of Dr. Arthur Frank (Doc. 101) is denied as moot.

IT IS SO ORDERED.

Dated this 20th day of November, 2018, at Kansas City, Kansas.

s/ Daniel D. Crabtree
Daniel D. Crabtree
United States District Judge